

Electronic Supplementary Information (ESI)

**Kinetic profile and urinary excretion of phenyl- γ -valerolactones upon consumption of
cranberry: a dose-response relationship**

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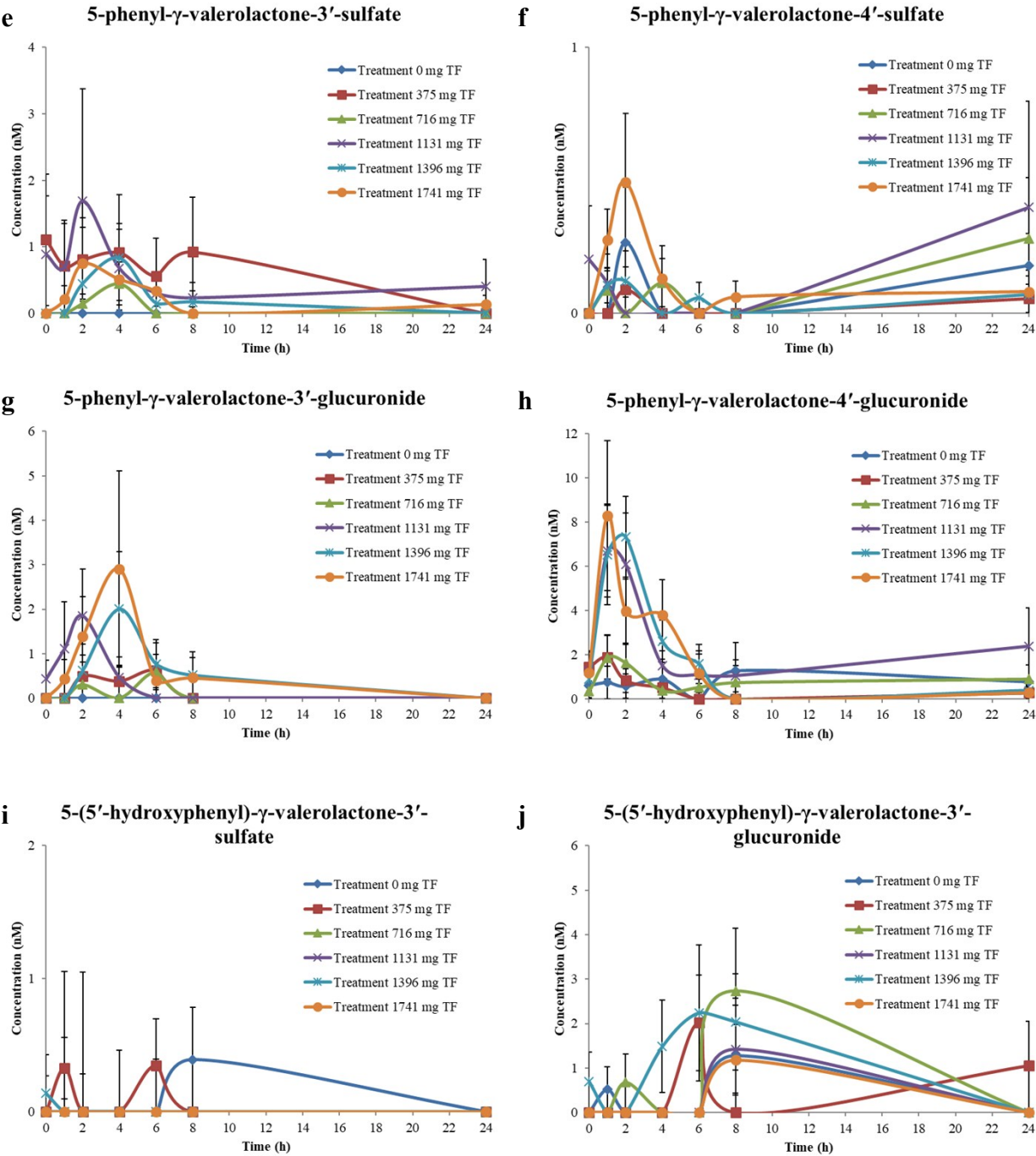
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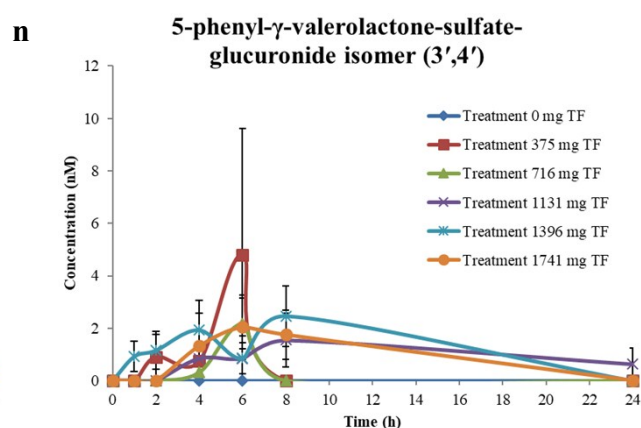
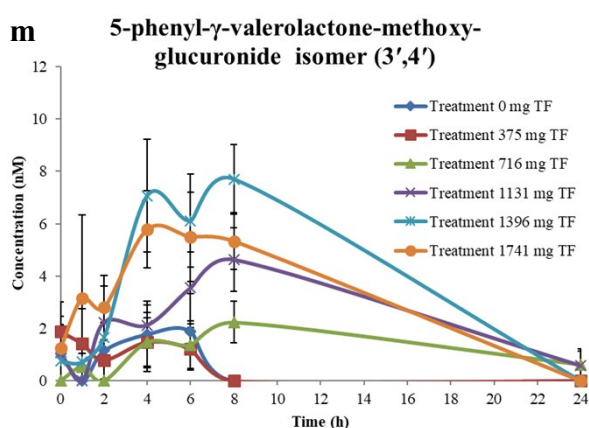
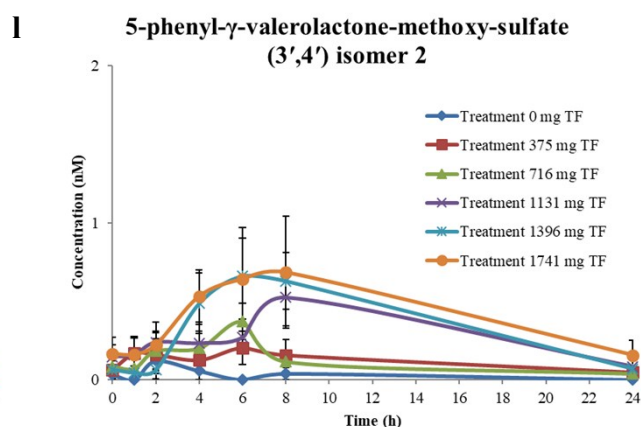
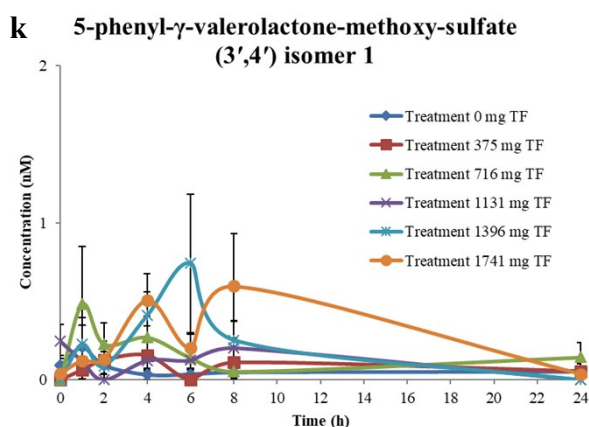
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20 **Supplementary Figure 1e-n.** Pharmacokinetic profile of 5-phenyl- γ -valerolactone-3'-sulfate (**e**),
21 5-phenyl- γ -valerolactone-4'-sulfate (**f**), 5-phenyl- γ -valerolactone-3'-glucuronide (**g**), 5-phenyl- γ -
22 valerolactone-4'-glucuronide (**h**), 5-(5'-hydroxyphenyl)- γ -valerolactone-3'-sulfate (**i**), 5-(5'-
23 hydroxyphenyl)- γ -valerolactone-3'-glucuronide (**j**), 5-phenyl- γ -valerolactone-methoxy-sulfate
24 (3',4') isomer 1 (**k**), 5-phenyl- γ -valerolactone-methoxy-sulfate (3',4') isomer 2 (**l**), 5-phenyl- γ -
25 valerolactone-methoxy-glucuronide isomer (3',4') (**m**) and 5-phenyl- γ -valerolactone-sulfate-
26 glucuronide isomer (3',4') (**n**) for the different treatments. Data are expressed as nM, mean \pm SEM
27 (n=10). Treatment 0 TF corresponds to the control drink, other treatments to cranberry juice drinks
28 with growing amounts of total flavan-3-ols.
29





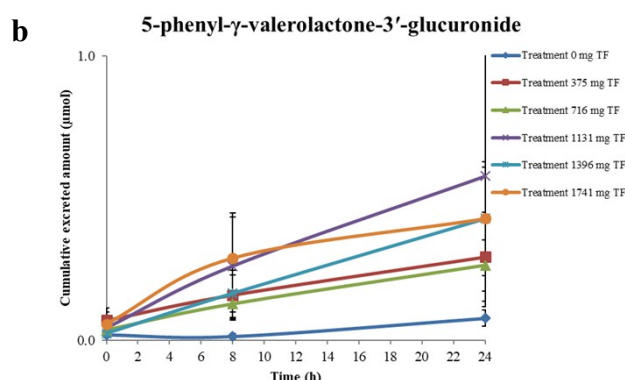
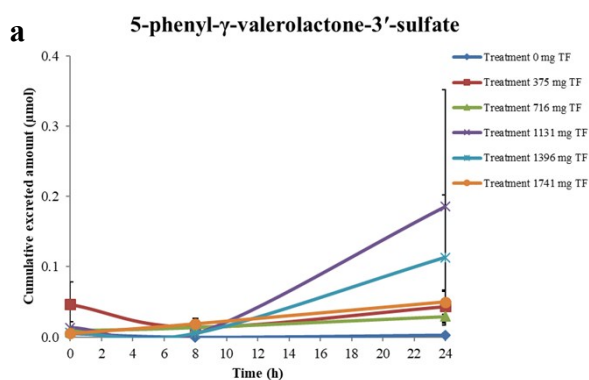
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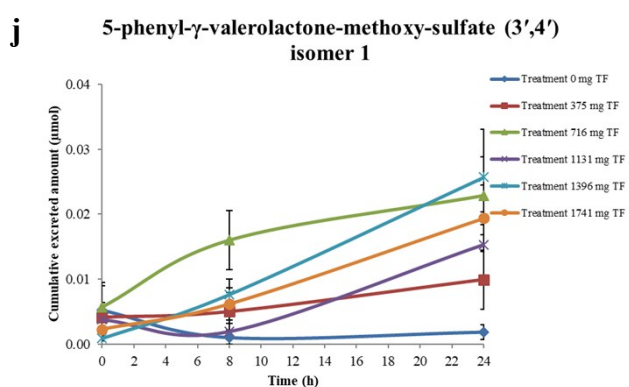
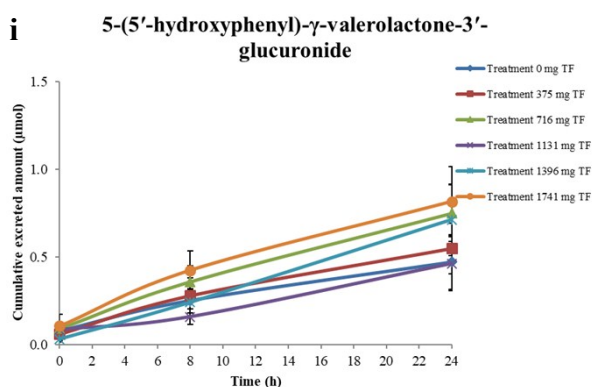
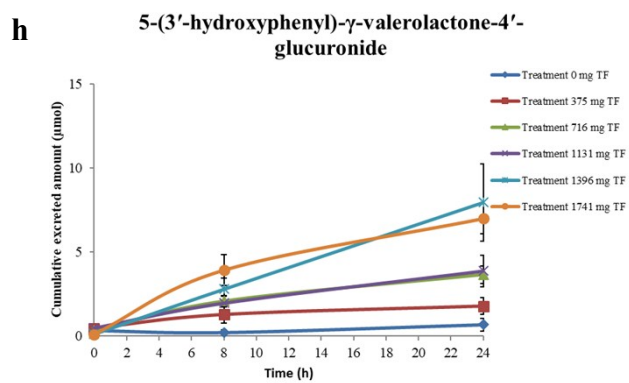
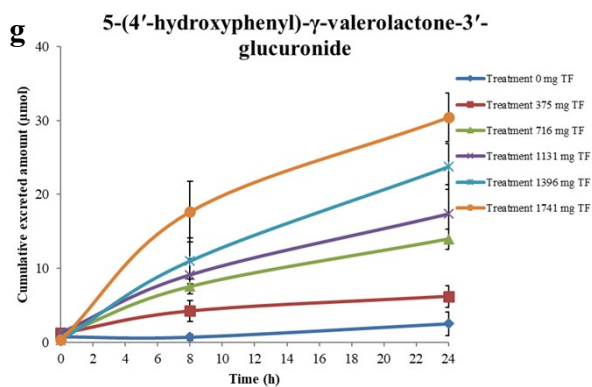
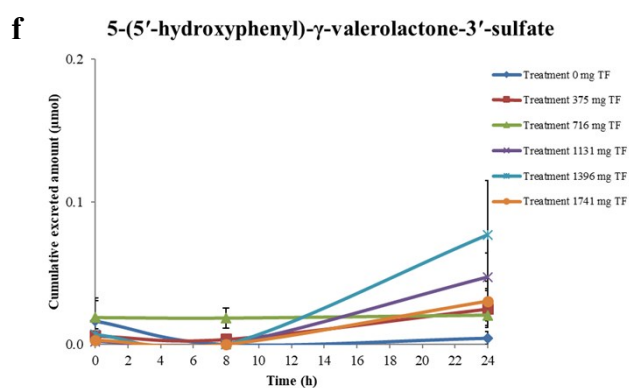
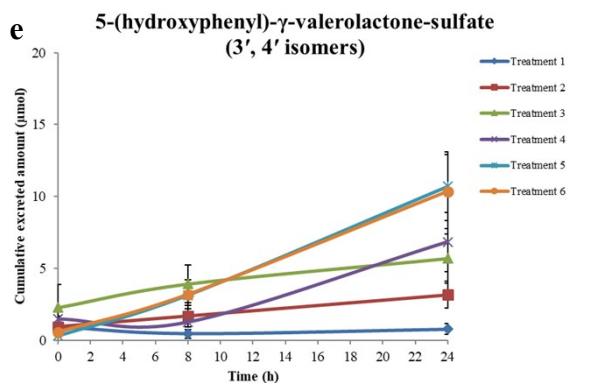
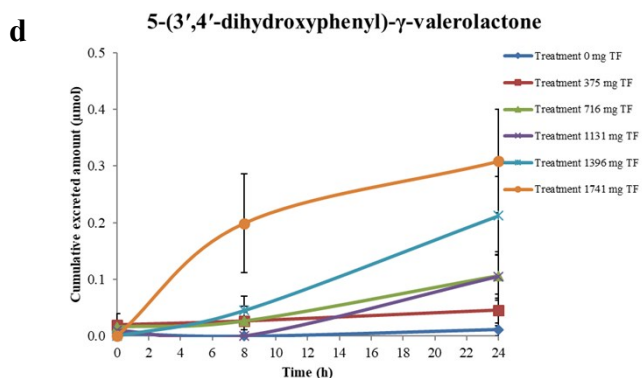
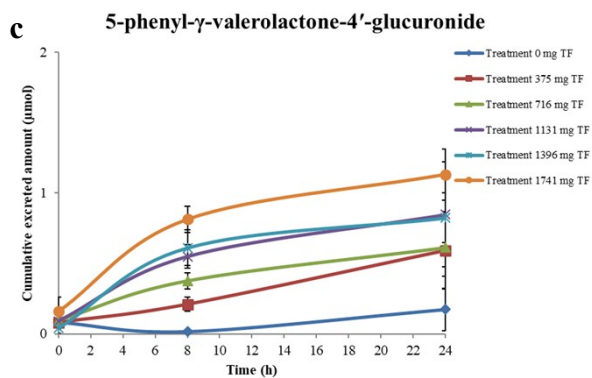
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37 **Supplementary Figure 2a-n.** Cumulative urinary excretion profile of 5-phenyl- γ -valerolactone-
 38 3'-sulfate (a), 5-phenyl- γ -valerolactone-3'-glucuronide (b), 5-phenyl- γ -valerolactone-4'-
 39 glucuronide (c), 5-(3',4'-dihydroxyphenyl)- γ -valerolactone (d), 5-(hydroxyphenyl)- γ -
 40 valerolactone-sulfate (3',4' isomers) (e), 5-(5'-hydroxyphenyl)- γ -valerolactone-3'-sulfate (f), 5-(4'-
 41 hydroxyphenyl)- γ -valerolactone-3'-glucuronide (g), 5-(3'-hydroxyphenyl)- γ -valerolactone-4'-
 42 glucuronide (h), 5-(5'-hydroxyphenyl)- γ -valerolactone-3'-glucuronide (i), 5-phenyl- γ -
 43 valerolactone-methoxy-sulfate (3',4') isomer 1 (j), 5-phenyl- γ -valerolactone-methoxy-sulfate
 44 (3',4') isomer 2 (k), 5-phenyl- γ -valerolactone-methoxy-glucuronide isomer (3',4') (l), 5-phenyl- γ -
 45 valerolactone-sulfate-glucuronide isomer (3',4') (m) and of the sum of quantified PVLs (n) for the
 46 different treatments. Data are expressed as μmol , mean \pm SEM (n=10). Treatment 0 TF corresponds
 47 to the control drink, other treatments to cranberry juice drinks with growing amounts of total
 48 flavan-3-ols.

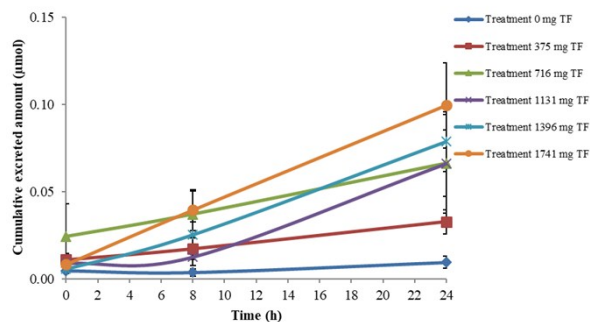
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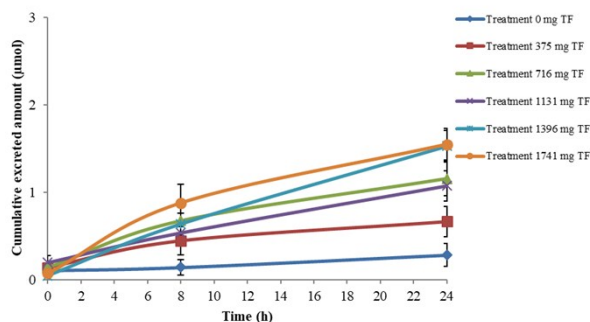
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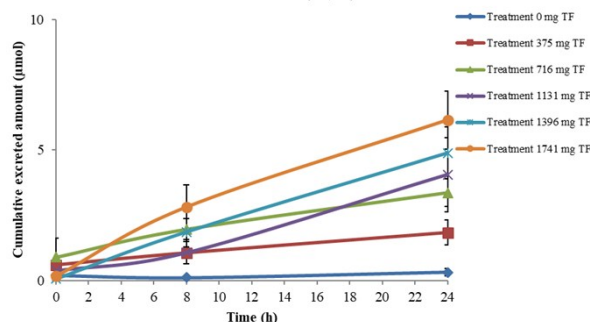
k 5-phenyl- γ -valerolactone-methoxy-sulfate (3',4') isomer 2



l 5-phenyl- γ -valerolactone-methoxy-glucuronide isomer (3',4')



m 5-phenyl- γ -valerolactone-sulfate-glucuronide isomer (3',4')



n TOTAL

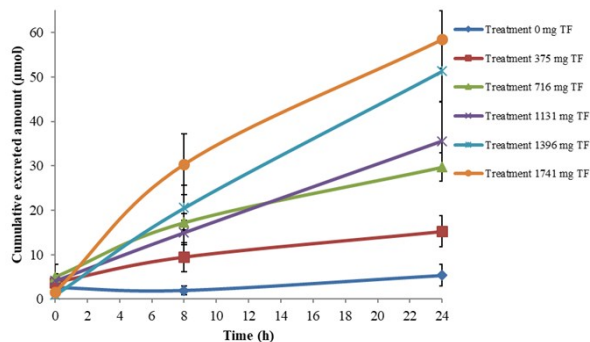


Table S1. Individual dose-response relation between (a) total amount of ingested flavan-3-ols and Area under the curve (AUC) of the concentration in plasma of PVLs over 24h and (b) total amount of ingested flavan-3-ols and cumulative quantity of excreted PVLs in urine.

a

Subject	Equation	R ²
All (n=10)	$y = 2.2575x + 113.07$	0.981
1	$y = 4.1603x + 183.67$	0.785
2	$y = 2.5589x + 425.06$	0.949
3	$y = 2.0872x + 421.29$	0.789
4	$y = 2.2223x - 102.44$	0.976
5	$y = 1.1354x + 228.06$	0.788
6	$y = 1.4211x + 184.62$	0.961
7	$y = 2.2859x - 107.54$	0.920
8	$y = 1.962x - 123.01$	0.852
9	$y = 0.5098x + 395.69$	0.310
10	$y = 4.2317x - 374.7$	0.985

Subject	Equation	R²
All (n=10)	$y = 0.031x + 4.9335$	0.982
1	$y = 0.0345x + 2.4507$	0.816
2	$y = 0.0436x - 3.4747$	0.785
3	$y = 0.0366x + 10.938$	0.799
4	$y = 0.0263x + 5.7057$	0.767
5	$y = 0.0235x + 0.3171$	0.794
6	$y = 0.05x + 4.1262$	0.669
7	$y = 0.0488x - 4.7871$	0.878
8	$y = 0.0363x - 5.895$	0.890
9	$y = 0.0139x + 3.6589$	0.414
10	$y = 0.0057x + 18.91$	0.453